# THE LEISURE HOUR.

BEHOLD IN THESE WHAT LEISURE HOURS DEMAND,

AMUSEMENT AND TRUE KNOWLEDGE HAND IN HAND.—Cowper.



A PERILOUS POSITION.

## STRAIGHT TO THE MARK.

CHAPTER XIII.-HIS BIRTHRIGHT.

Then John he did him to record draw,
And John he caste him a God's pennie;
But for every pounde that John agreed,
The land, I wis, was well worth three.

—Old Ball

JOSHUA DEAN was quite sincere when he protested to his sister that he would take only one No. 1442.—AUGUST 16, 1879.

glass with Mr. Chaffin; and Luey, taking him at his word, or perhaps on the contrary, doubting his resolution, took away the bottle and locked it up. Mr. Chaffin thought it was rather a shabby thing to do, but made no remark, and as soon as he had emptied his tumbler rose and bade them good night.

"You'll go a step of the way with me, won't you?"
Mr. Chaffin said, as Dean opened the door for him.
The latter assented, and they walked along the shore together towards the Jolly Dolphin.

PRICE ONE PRINT,

ore, to nwell, his re-Court. gently teir to that, tuated, tt once death th the s Wilis only uently,

levolve
ttly did
to the
luchess
y her to
th to a
rone as
contemMoses
ich the

beauty

that in or geoasion to ividly as rvellous est type, al, conlarge as wer, the ence and icient to ne of our accident, is manipreciated en intro-

of that essens its in see the it to know le glory, it into a

land is to Bremen. England, amassed chant and four sons, London, academy wool and nily cloth ir amount in all his natever he dealing in he fortune As was d man-a friend and ly followed

ly followed g a seat in as made a lliam Pitt, short intership of the he Earl of aring, both of two mil-

"Yes," said Chaffin, surveying the shipyard with | the house and garden adjoining by the light of the moon, which was nearly full—"Yes, you have a nice place here; but you will soon be built in. This is the direction in which all the chief improvements The shipyard will be quite out of will be made. place here after a year or two."

"It will last my time, I dare say," said Dean.

"I'll tell you now what I should do if I were in your place," said Chaffin. "I should look out for a bit of ground at the other end of the town; you could get a bit there cheap, and it would answer your purpose quite as well as this, or better. Then you could sell this for a lot of money, and clear a good round sum by the exchange."

"But I don't want to sell," said Dean. "I won't

sell, I tell you."

"Yes you will," Chaffin replied. "Wait a bit; you'll have to shift your shipyard anyhow. there will be a terrace all along in front of it very

"They can't turn me out," said Dean; "it's my

freehold.

"An Act of Parliament can do anything. That's why I am advising you to be prepared for it, and to look out for another site in time."

They walked on together until they came to Mr.

Chaffin's inn.

"Come in," said the contractor.

"No, I thank you." "Oh yes, come in."

Mr. Chaffin took his companion by the arm and led him only half resisting in to the inn parlour. He had resolved to show this uncouth shipbuilderfellow, as he called him mentally-a good example of hospitality. He had allowed the brandy bottle to be locked up after the first glass; now he should have as many glasses as he liked at Mr. Chaffin's expense, to teach him better manners. That would be rendering good for evil the contractor thought.
"What will you take?" Mr. Chaffin asked, as

soon as they were seated.

Dean would have again refused, but after a feeble protest submitted to Mr. Chaffin's importunity. It is needless to describe the scene that followed. late hour Joshua Dean left the Jolly Dolphin with an uncertain step, and went towards home; his eyes were bent upon the ground, his hat slouched over his face, and he paused from time to time to steady himself against a rail or a house. Sufficiently sober to be conscious of his own degradation, he shrank from the shame of approaching his own door, where, as he well knew, his sister would be watching for him, and loitered by the way altogether miserable. Chaffin looked after him with mingled feelings of pity and contempt. Why should he be so overcome pity and contempt. Why should he be so overcome by a glass or two? he thought. He had taken a great deal more himself, and was none the worse for it. It was a great mark of weakness to be so easily upset. Mr. Chaffin expressed this opinion to Mr. Brimmer, who also came to the door to witness his customer's departure.

"Yes," said Brimmer; "some men can't stand nothing. Now that there poor fellow will be so upset by what he has took, that he won't get over it for a

week or ten days, or maybe a fortnight."

"You don't mean that?" said Chaffin, with a slight feeling of remorse.

"I don't mean that it will make him downright ill, sir; but to-morrow morning he'll be here again

as soon as I'm open; and he'll go on, nobody knows how long. He can't help it. It's some months, though, now since he tasted a drop of spirits, and I wondered to see him here to-night. He ought to learn to drink in moderation. It's men like him as brings us publicans into disfavour. Not as he ever takes a great deal; a little is sufficient to upset him. You could see that yourself, sir, couldn't you?"

he

th

no 2 1

an

an

fro

tio

De

Do

me

WI

Ch

ag

th

be

of

H

cri

th

m

lea

wl

he

t.w

di

th

it

th

D

be

kr

of

in

no

88

I

di

da

st

Yes, Mr. Chaffin could see it; Mr. Chaffin had seen it after the first glass at the inn; but he had gone on urging him to take more, nevertheless; he could not be inhospitable; it was not his fault if other men did not know when to stop. He was not answerable for other men. With this sop to his conscience he wished Mr. Brimmer good night, and went upstairs to bed, well satisfied on the whole with the day's proceedings. He had found water, and was confident that there would be plenty of it wherever it was properly sought for. The Sandy Frith Company would go on and prosper. He would keep his eyes on Dean's bit of freehold, and entertained but little doubt of being able to secure it for himself by-and-by. He should make a lot of money by the place, he said to himself as he turned into bed. Yes; he had done a good

day's work.

The next morning he went by an early train to London; but before a week had elapsed he was again upon the spot. A great number of workmen followed him and were employed immediately upon different parts of the estate, some sinking wells, others carting away soil, and others preparing materials for building. Mr. Chaffin completed his arrangements for renting the stone quarry, and began to get stone there in large quantities; and sites were laid out all over the little town, with boards to signify how they were intended to be occupied. These important works required Mr. Chaffin's frequent attendance at Sandy Frith, and he missed no opportunity of seeing Joshua Dean, who would often spend an evening with him at the Jolly Dolphin. Mr. Brimmer's evil augury had been realised, and the poor man seemed to be under a spell; despising himself for his weakness, he appeared to be unable to resist the intolerable craving for stimulants which came over him at all hours of the day, and for several weeks together he was either wretchedly depressed or unnaturally elated. Lucy could do nothing with him. He would listen to her eager remonstrances with shame and contrition, and hold out perhaps for a day or two against temptation, but would give way as last, and run to greater excess than before. Mr. Chaffin seemed to think it was no affair of his. The poor man never showed himself to him in a state of absolute intoxication, and the contractor might have thought he was doing him a kindness by offering him just one glass, when he saw him depressed and apparently pining for it. At all events "he could not be inhospitable," that was his plea; and Joshua Dean yielded to the tempter again and again, even while loathing himself and resolving with all his power of will to yield no more.

Meantime business went on badly at the shipyard; Dean had to find money for materials and wages, and the work that he had on hand remained unfinished, or if sent away, was returned as unsatisfactory. Many conversations took place as to the sale of the shipyard, and Dean began to listen to the proposal. It would be a good thing, he thought, to break away from the place, and begin life again somewhere else, away from the reach of temptation, as if such a thing were possible.

Mr. Chaffin offered him a good price for the property; he could make provision for his mother and sister, he thought, and go abroad somewhere, where there was no Jolly Dolphin and no Chaffin. He might ship as a seaman on board some temperance vessel. These and similar plans were turned over in his confused and troubled mind one after another, all springing from the same source, self blame and self-dissatisfaction. The result of all was that, one evening when Dean and the contractor were together at the Jolly Dolphin, pen and ink were called for and Mr. Brimmer was invited to come into the parlour and drink a glass of his own brandy and to sign his name as a witness to a contract or agreement for sale between Joshua Dean of the one part, vendor, and Daniel Chaffin of the other, purchaser, whereby the former agreed to sell and the latter to buy and purchase all that plot and parcel of land with the buildings and tenements thereon, called the shipyard, situate and being at Sandy Frith, etc., etc., at and for the sum

"It is a deal of money," Mr. Chaffin said, with a grave face, as he folded up the document, and put it in his pocket-"a deal of money, Mr. Dean."

The vendor did not show any signs of exultation. He knew too well what he had done, but was hardly able to review all the conditions and consequences so critically as might have been desired. "Yes," he thought to himself, "it is a good price, but I have sold my birthright." There was a bottle upon the table, and he helped himself again to its contents before leaving the inn. He did not intend to tell his sister what he had done; it would make no difference to her, he argued. He was to continue to occupy the house and shipyard at a moderate rent for a year or two at least. Mr. Chaffin looked to the future; he did not want to do anything with the property until the new buildings in its vicinity should have added something considerable to its value. He had bought it wholesale, as it were, and hoped to sell it retail by the yard or foot by-and-by. In the meantime Joshua Dean was to occupy it as before, and the sale was to be a secret. Mr. Brimmer even was not supposed to know the contents of the deed which he had witnessed, though he must have had a shrewd suspicion of it when he saw the money payment which formed the deposit handed over, and the receipt endorsed.

"Yes," Mr. Chaffin repeated, when he was alone, "it is a deal of money; but if he takes the bulk of it in Sandy Frith shares, as I have no doubt he will, it will suit my purpose well. I hope he will be steady now, and stick to work again. I'm afraid he has not been doing much good lately. I am sorry for his sister, as she seems to be dependent on him, and for his mother, too, at her age. Eighty-one or two she is I know. She can't live long; I promised to let her occupy the house as long as she wants it, and I won't disturb her if I can help it; it won't be very long, I dare say. I hope Dean will take a good turn and be steady now. I do hope he will, I'm sure."

CHAPTER XIV .- NE JOCO QUIDEM

Pray you let us not be laughing-stocks to other men's humours.

—Shakespeare.

We must now return for a short time to Tom Howard and his school experiences. Although his adventure with the brick was passed over without notice by the masters, the fame of it spread throughout the school, and created a great sensation. Boys from other houses stole up to the dormitory at for-

bidden hours to look down at the spot where he had made his perilous descent, and peeped through the head master's garden gate to look up at it. Howard rose at once to a high place in their estimation, and they began to inquire among themselves where he had come from, and by what means he had acquired such activity.

"His father is a sailor," said one.

"I thought he was a pastrycook," said another. "He is an East India man," said a third.

"An East Indiaman is a ship, but Howard comes from India all the same."

"That will account for it. There are very big trees out there, and they can all climb trees in Africa."

"Africa, you gander!"

"Well, Asia, then. It's all the same as far as the climbing goes. There used to be a great tree in the Crystal Palace, which had been brought from one of those places abroad, a thousand feet high, or something like it. I dare say Howard could have swarmed up to the top of it."

So the boys entertained each other with mingled

facts and fancies.

Tom was not fond of showing off, and did not seek notoriety, but he was required after this to climb ropes and spars in the gymnasium. He had been an adept at this in one of the London gymnasiums, having taken great delight in everything that reminded him of his experiences on board ship, and fancying himself again a sailor, as he went up and down the ropes and ladders. The monitors at Abbotscliff, who had the management of the athletic sports which were exhibited every year in public in the spring, looked upon Tom as a great acquisition, and resolved that he should go into training in due time, and carry off a prize or two for his activity and daring.

Who it was that put the briel into Chaffin's bed was never discovered. Little Martin had the credit of it, but denied it, and Tom believed him, though some others did not. The custom of "greening new-comers was brought by these events under discussion; some of the boys maintaining that it was silly and childish; anybody could do it who had impudence enough, and who did not mind about telling lies. Others defended the practice, denying that there was any harm it. It was only done for fun, and could not hurt anybody, they said.

"It sharpens a new fellow's wits," said one, "and makes him look about him."

"There's no wit in it," said another, "so it can't out wit into anybody else. 'Iron sharpeneth iron;' but a 'soft' can green another; look at Chaffin!"

"Grown-up men do it," the former speaker replied.
'It's only like making April fools, or sending a

simpleton to buy strap oil at a cobbler's."

"Such customs are more honoured in the breach than the observance," was the rejoinder. "In Scotland, a poor half-witted fellow is sometimes sent about with a note, in which is written, 'Send the bearer further,' and each person to whom he delivers it acts upon the hint, so that he may go to a dozen places before he finds any one good natured enough to tell him that he is a good: 'hunting the gowk,' they call it, but, as an old rhyme says,-

> 'Tis a thing to be disputed, Which is the greater gowk reputed, The man who innocently went, Or he who him designedly sent ?"

onths. and I cht to im as ever him. d seen one on ld not en did ole for vished o bed, dings.

knows

n and bit of being should imself a good ain to

e was

there

sought

rkmen y upon others als for ements t stone out all w they ortant ndance nity of nd an

Brimhimself resist came several pressed ng with trances

aps for ve way Mr. The a state might

offering ed and e could Joshua n, even all his

ipyard; res, and inished, Many ipyard,

t would rom the ay from occible.

"Still, it's not fair to talk of it as if it were a crime," said another of the boys. "I would not tell a lie for anything, but I do not see the harm of stuffing a goose or a gowk."

"It is lying, though, call it what you will," said Mr. Grantly, who happened to pass at that moment. "You make me think of a sentence in the Life of Epaminondas, that you read the other day in class, 'Adeo erat veritatis diligens, ut ne joco quidem mentiretur' (He never would tell a lie, even in joke, because he loved the truth). Those who love the truth will be careful of it. I have begun to think more seriously about this 'greening' than I did. It is not only foolish, but dangerous. Epaminondas reads us a good lesson—'ne joco quidem;' that should apply to everything that is contrary to strict 'jesting which is not convenient,' as St. Paul calls it. A silly fellow presented a gun at his sister the other day, in joke, and shot her. He did not mean any harm. It is better not to trifle with guns or falsehoods. 'No joco quidem;' let that be the rule, boys; we shall be on the safe side then."

From that time forward the words "Ne joco quidem" became a proverb among the boys at Abbotscliff. Very often they were quoted without any relevancy. When, for instance, one asked another to lend him a shilling, "No joco quiden" would be the answer. But the lesson was not the less useful on that account. "Greening" became unfashionable, and those who helped to circulate a false report were looked upon as cads or blockheads. As for Howard, he was set down by all as a plucky little fellow, and was popular. But his chief friend was the young boy Martin-or Swallow, as he was invariably called. They became constant companions. To him Tom could speak of his mother on the seas, and of his father in India, while the younger boy would delight to talk, in his turn, of his home at Brakeley, and of the pleasant vicarage and parish in which his parents dwelt. The two boys would sit together upon the ruined tower near the schoolhouse, looking out over the sea and opening their hearts to one another without reserve. It was a famous place, that old tower, and Martin was not afraid to climb up into it in reliance upon his friend, though his head would swim if he looked downwards from the height, and he never could overcome a feeling of fascination like that which is said to take possession of the bird when it flies down into the gaping jaws of a snake; and he used to say that unless Tom Howard held him tight he should be tempted to throw himself into the gulf of which he felt such terror. He had an idea, however, that if Tom went to sea he should like to do the same, and was resolved on that account to learn to climb ropes, and to overcome his giddiness; and if perseverance and resolution could accomplish it, it was likely he would succeed.

One morning they were sitting upon a part of the old wall, fifty feet or more above the ground, when a great stone, which had been loosened by the weather, broke away from its place above them, and came crashing down, rebounding from one wall to the other, until with a leap it passed over their heads and fell to the ground. Tom felt the young boy's hand shrink as he held it firmly within his own, and observed the effort which he would have made to escape from the threatening danger; but he bade him sit still, and pressed his hand upon him to keep him to the spot until the stone had passed.

"I thought it would have knocked us off the wall,"

said Martin, in great trepidation.

"And you very nearly lost your balance in trying to avoid it." Tom replied.

"I shall never be as cool as you are," said Martin. still trembling at the thought of the danger he had

"I ought not to bring you into such places," Tom replied. "You are a year or two younger than I am, and have not had the same practice. We had better go down now; give me your hand. Another stumble! Take care, Swallow; sit down and rest a bit; this is a safe place just here."

The boy was very pale; he looked down into the

w

ir

01

m

ci

st

th

th

th

la

88

ei R

th

fr

ne

In

m

8e

m

di

th

Bu

re

th

of

an

ha

th

na

sh

str

or

Cet

w

de

of

for

Wi

da

ap

mi

depth below them and shuddered.

oth below them and shuddered.

"I shall never get down there," he said; "it's ten
The said; "it's ten
The said; "it's ten
The said; "it's ten
The said; "it's ten times worse going down than coming up. if I could not go along that narrow bit of wall. I am afraid to move. I wish I were not such a coward."

"Take your time, Swallow," said Tom, cheerfully. "Take hold of my jacket, watch where I set my feet, and put yours in the same place after me; slowly now; don't look at anything else; now sit down and lower yourself over the slope. I'll hold

you; do as I bid you. Come."

Tom locked so determined, and spoke so sharply, that the little boy, yielding to the influence of a master mind, mustered courage to follow his intrepid leader. There was really very little danger, and with Tom's help he reached the ground in safety. He felt ashamed of himself afterwards, and feared that Tom would have but a poor opinion of him; but they continued as good friends as before, though they did not frequent the ruined tower so much; or if they went there, did not climb so high.

"You will get over it some day," Tom said.
"I'm afraid not," Swallow answered, mournfully. "I should never be able to stand on the top of a

ship's mast."

"That's not necessary," said Tom. "And it's easy enough to go aloft, because you have something to lay hold of. A sailor makes more use of his hands than of his feet when he's aloft. He always feels safe as long as he has a rope between his fingers.

The bell rang for dinner while they were speaking. and they hastened to obey its summons; but poor little Martin had a bad headache that afternoon, and it was evident that his nerves had been severely

shaken.

#### UTOPIAN EXPERIMENTS AND SOCIAL PIONEERINGS.

BY THE REV. M. KAUFMANN, M.A., AUTHOR OF "SOCIALISM: ITS NATURE, ITS DANGERS, AND ITS REMEDIES CONSIDERED." VII. - COMMUNISTIC SOCIETIES IN NORTH AMERICA.

T was remarked by John Stuart Mill that "fair trial alone can test the workableness of any new scheme of social life." Now it so happens that trials of this sort have been made, and that under favourable circumstances, on the rich virgin soil of America, by people thoroughly in earnest, in most cases possessing fair abilities and means in addition to the spirit of self-denial required for such undertakings. Enthusiastic would-be regenerators of society have left the Old Country for the Far West, prepared for almost any sacrifice in the attempt to found new communities on the basis of their respective theories.

Here we meet with religious sects and social idealists full of faith in their own system, engaged in the very act of trying such Utopian experiments, the results of which are still before our eyes. And it remains for us, in this and the next papers, to

describe these settlements, their foundation, development, and present condition, so as to measure the extent of their success; comparing expectation with fulfilment, and affording an opportunity to our readers to judge for themselves how far these Transatlantic settlements may or may not be regarded as patterns of the society of the future, and whether or not a further extension of their social system may be desirable in any attempts at social reconstruction.

g

n

ad

I

ad

er

ta

he

ten

99

d."

llv.

my

ne;

sit

old

ply,

fa

pid

and

ety.

ared

but

ugh

; or

ully.

of a

easv

g to

ands feels

king.

poor

noon.

erely

AL

t: ITS

"fair

y new

that

under

oil of

most

dition

under-

of so-West,

npt to

eir re-

ged in

its, the

And it

ers. to

In our examination of the social schemes, we shall take note in each case of the time and surroundings which favoured and gave the movement its chief impulse; the nature, capacities, and resources of the emigrants themselves, in a mental, moral, and material point of view; and the surroundings and circumstances of their position in the new ground occupied by them. We shall also consider the constitution of each settlement, and the organic laws for the promotion of their well-being, and see how far this result has been attained, and whether experience thus far holds out any real hope of solving the labour-question by a more general adoption of the same system.

The main currents of emigration to the West we purpose tracing owe their first impulse, directly or indirectly, to the two movements which have exercised the greatest influence on European history-the Reformation and the Revolution.

The social fictions of the sixteenth century, and the religious revivals of later days, take their rise from the former; the Socialistic agitation of 1830, and successive reformatory efforts, are closely connected with the latter.

The former section is represented by the Shakers, Inspirationists, Harmonists, Oneida Perfectionists, and others representing the class of religious Communists. The latter section consists of the Owenite settlements, Fourierist Phalanstères, and Icarian communes, which may be regarded as the secular division of American Socialisms. It will be seen in the sequel that those experiments have been most successful which have been inaugurated under religious auspices, while those have only enjoyed an ephemeral existence which have lacked the religious element in their formation.

In this and the next paper we purpose to speak of the former only, and proceed to give an account, first, of the Shakers, because, as we are told by a competent authority, their "influence on American Socialisms has been so great as to set them entirely apart from the other antique religious communities." \* Their name is derived from the physical convulsions which shook their whole frame when under the influence of strong religious fervour. They themselves trace their origin, through the French prophets of the last century, to the Shakers of the Commonwealth.† But we find no historical notice of them till about 1747, when James Wardley, originally a Quaker, a man of deep religious convictions and under the impression of having had supernatural dreams and revelations, founded a small community, over which he and his wife Jane presided. Ann Lee, a blacksmith's daughter, of Manchester, joined them in 1758. She appears to have been a sincere religious enthusiast, by no means devoid of practical sense; humbleminded, yet possessing natural dignity, which com-

manded confidence and respect from her followers at a later date, when she had become "Mother Ann" and the head of the Shaker community in America. She was only twenty-three years old when she became a member of the Shakers' society. Twelve years later, when suffering persecution with the sect to which she was attached, she professed that, "by special manifestation of Divine light, the present testimony of salvation and eternal life was fully revealed to her." Now she made the statement, on the ground of supernatural communication, that marriage was wrong, and "testified against it." Presently "she was, by direct revelation, instructed to repair to America," where "the second Church would be established." Accordingly, Ann Lee embarked in May, 1774, at Liverpool for New York, accompanied by eight persons, mostly near relatives, including her husband, to whom she had been married long before her anti-matrimonial visions. It was by her exertions that for the time they maintained themselves in New York, and under her leadership they afterwards settled in "the woods of Watervliet, near Niskeyuna, about seven miles north-west from Albany." Here they cleared the land, and, after endless hardships and vicissitudes, received an accession of new adherents from the paighbouring Baptist community in New Lebanon, wherea religious revival had led to the sudden exodus of those under its influence. In their wanderings they were attracted by the teaching and practice of self-denial by Ann Lee. They became her disciples, new converts were added in the immediate vicinity, and Mother Ann travelled from place to place to confirm these newlyplanted churches in Massachusetts and Connecticut, having New Lebanon for their centre.

In 1805 there were twenty communities belonging to the Shakers. The population in 1847 was from 4,000 to 5,000. Since then there has been a decline in numbers, with a remarkable increase in pros-

When last visited by Mr. Charles Nordhoff (to whose interesting volume on "The Communistic Societies of the United States" we are deeply indebted in this paper) there were eighteen societies, scattered over seven States, subdivided into several "families," fifty-eight in all, with an aggregate population of 2,415 souls, and owning real estate amounting to 100,000 acres.

These "families" form each a separate community of celibates of both sexes, of from thirty to ninety persons, who live together in one large house, a wide hall separating the dormitories of the men from those of the women. Buildings in which various industries are carried on group round this family mansion, and in them the brothers and sisters follow their respective callings, for although agriculture forms the basis of their commonwealth, every member follows one or more other avocations besides. They have a uniform style of dress, and in their social habits aim at extreme simplicity, whilst in practical life they are described as "industrious, peaceful, honest, highly ingenious, patient of toil. They hold that he only is a true servant of God who lives a perfectly stainless and sinless life, and they add that to this perfection of life all their members ought to attain." They are pronounced Spiritualists, believing in the most intimate connection and communion with souls departed. Strange communications are received from the spiritland at their religious meetings, some of which

Noyes: "History of American Socialisms," p. 595.

† Massden: "Dictionary of Christian Churches and Sects," ii. 320-21.

The work," they said, "which God promised to accomplish in the latter day, was eminently marked out by the prophets to be a work of shaking." (Shaking the heavens and the earth.)

are given in full by Mr. Noyes in his "American Socialisms,"\* Their religious services are peculiar. Mental prayers are preferred to audible petitions. Singing and dancing, "as David danced before the Lord," form the chief feature of their services. In marching round the assembly-room, at quick step, to a lively hymn-tune, the women following the men, and all often clapping their hands or holding them out to "gather a blessing," they work themselves up at times into strong religious excitement, until one of the members, bowing before the elder or elders, will suddenly begin a whirl resembling that of the dancing dervishes of the East, whilst in the next moment they all will solemnly kneel down in silent prayer, when some brother or sister is impressed to deliver a message of comfort or warning sent from the spirit-land, or some spirit asks for the intercessory prayers of the assembly.

Evenings not spent in such and similar religious exercises are devoted to family meetings, and filled up with innocent, though by no means very lively, diversions and instructive intercourse. On Sunday evenings they visit each other's rooms, three or four sisters visiting the brethren in each room by appointment, and engaging in singing and in conversation

upon general subjects.†

Their habits of life are frugal. They rise at halfpast four in the summer and five o'clock in the winter; breakfast between six and seven, dine at twelve, and sup at six; by nine, or half-past, they are all in bed and lights are out. Each brother is assigned to a sister, who takes care of his clothing and linen, and has the oversight "over his habits and temporal needs." They eat in the general hall, and the preparation of food is left to the sisters, who take it in turn to attend to this, as well as the wash-

ing and ironing and other light work.

Their diet is simple and sufficient. All turn to work after breakfast, under the leadership of "caretakers," or foremen, who are subordinate to the But "Shakers do not toil severely; they are not in haste to be rich. . . . Many hands make light work, and where all are interested alike, they hold that labour may be made, and is made, a pleasure." There is no servant class, but, like the monks of old, they endeavour, as far as possible, to supply their own needs, and try to get on without the use of outside labour. They are good and successful farmers, and their buildings are always of the best, whilst order and cleanliness are a distinctive feature of their settlements. As to external prosperity, Miss Harriet Martineau, after a visit to Mount Lebanon, is reported to have said: "A very moderate amount of labour has secured to them in perfection all the comforts of life that they know how to enjoy, and as much wealth as would command the intellectual luxuries of which they do not dream. The earth does not show more flourishing fields, gardens, and orchards than theirs. The houses are spacious, and in all respects unexceptionable. The finish of external things testifies to their wealth, both of material and leisure. If happiness lay in bread-and-butter and such things, these people have attained the summum

In culture and the graces of life, the Shakers do not stand high. Although some of their members belonged formerly to the professional classes while others

Noyes: "History of American Socialisms," p. 605 st seq.

have been mechanics, sea captains, and merchants, the bulk of the community are very simple people, although their successive leaders, from Ann Lee to Elder Frederick Evans, generally were shrewd, possessed of superior power of management, and able to rule well. The Shakers are not a reading people, and the libraries of their most cultured leaders are of extremely limited range. In the Shaker community at Canterbury they have, however, a fine school, with a special music-room; they take in twelve or fifteen newspapers, and have a library of 400 volumes, including history, voyages, travels, scientific works, and stories for children, but no novels. The society of Shirley is distinguished for its love of flowers, but we are told they do not cultivate any. The walls of the rooms are bare of pictures, but are lined with wooden pegs instead for hats, cloaks, and shawls, the useful taking preference to the ornamental, from which we conclude that a taste for natural beauty, art, and literature is but imperfectly cultivated among the people. When we remember this in connection with the fundamental law of the society, that "it is an established principle of faith in the Church, that all who are received as members thereof do freely and voluntarily, of their own deliberate choice, dedicate, devote, and consecrate themselves, with all they possess, to the service of God for ever "-i.e., accept community of property as their rule of life—we cannot help coming to the conclusion that this mode of life tends to hinder social progress, mental development, and exercises a cramping and narrowing influence in keeping all alike on the same plane of rigid uniformity by means of rules and regulations, and thus preventing expansion of the intellect into the regions of imagination and discovery. A general dulness and noiseless motion in the same grooves characterises their daily life. The only changes in this monotonous existence are conversations among themselves, which, considering the paucity of subjects to be discussed, becomes rather dreary at times. In their more exciting religious entertainments are to be found, indeed, the merry sounds of song and dance, and the imaginary music from the land of spirits, which produce a momentary exhilaration, or a dreamlike evanescent imaginative effort. But these make room immediately again for the colourless sameness and sombre uniformity of every-day life. "To a man or woman not thoroughly and earnestly in love with an ascetic life and deeply disgusted with the world," says Mr. Nordhoff, "Shakerism would be unendurable, and I believe insincerity to be rare among them. It is not a comfortable place for hypocrites or pretenders." We need not, therefore, be astonished that the society is not fast increasing. Since they cannot perpetuate themselves on account of their celibate life, and have also ceased to reinforce their ranks by the adoption of children, the rate of increase in membership has not kept pace with the vast accumulation of wealth, mainly in landed pro-The society seems therefore in danger of painless extinction unless new religious revivals among other sects will replenish their dwindling numbers.

the

An

per

pla

ord

mi

vot

det

the

we

of '

**g**'01

ma

Ge

tra

and

thi

tio

30

Ju

da

ne

801

me

the

go

of

Pe

lor

Th

of

all

ad

to

for

cel

on

gr

ye

an

th

gil

081

di

to

CO

do

pe

the

Ge

the

tri

of

mo

an

H

mo

an

The spirit of philanthropy allied to the Methodist revival movement in England, which sought to elevate the masses of the people above the low level of guilt, ignorance, and suffering, whilst the contemporaneous discoveries and improvements in machinery by Watt; Hargraves, Arkwright, and Crompton excited the cupidity and high expectations of the productive classes, was at its very height when Ann Lee and her followers, impressed by this all-pervading spirit of social amelioration, determined to plant a new religious faith on the basis of new social order in America.

On the Continent a similar temper of the popular mind had produced a similar body of religious votaries, who, dissatisfied with what they called the deteriorated Christianity of the day, seceded from the Established Church, and, to avoid persecution, went to the United States to enjoy the free exercise

of pietistic mysticism.

nts.

ple,

e to

005-

e ta

ple,

e of

nity

ool,

or e

nes,

rks.

iety

but

s of

with

wls,

from

uty,

nong

etion

it is

that

reely

dedi-

they

ccept

nnot

f life

nent.

ce in

uni-

thus

gions llness

acter-

nono-

elves,

o be

their

to be

lance.

pirits,

or a

these

urless

y life.

nestly

d with

would

e rare

hypo-

ore, be

asing.

ecount

inforce

rate of

th the

ed pro-

ger of

evivals

indling

thodist

to ele-

level of

ontem-

machi-

Cromp-

ions of

About the time when in this country Cowper in gentle accents sang of the common brotherhood of man, and Godwin advocated the rights of humanity in his "Caleb Williams," a man of the people, in Germany, without poetic genius or philosophical training, gave vent in his simple way to similar ideas, and determined to carry out practically these philanthropic aspirations. When deep thought and reflection had matured him for action, George Rapp, with 300 of his followers, set out for Baltimore on the 4th July, 1804, to be followed out by others at no distant date for the purpose of organising themselves into a new commonwealth in the Far West. Rapp was the son of humble parents, a man of slender attainments, but endowed with faculties for independent thought, persevering industry, and the capacity for governing.

On landing he was able to purchase 50,000 acres of wild land, and to found a Harmony Society in Pennsylvania, and as most of his followers belonged to the peasant and mechanic class, he found in them the proper instruments for colonisation. They were thrifty, and few of them entirely destitute of means. It was agreed that they should "throw all their possessions into a common fund, and to adopt a uniform and simple dress and style of house; to keep thenceforth all things in common, and to labour

for the common good of the whole body."

After some time they, like the Shakers, adopted celibacy. The first beginnings of the enterprise were on a humble scale. From forty to fifty log-houses were erected, together with a church, schoolroom, grist-mill, and some workshops. In the first two years 500 acres were cleared, and other buildings and industries were added. Ten years later they sold their land to transfer their settlement to a more eligible site, realising 100,000 dollars for the property. This price was below the real value, which has been estimated as at the least 150,000 dollars, which, if divided among them, would have given 1,200 dollars to each head of a family, a considerable sum if we consider that they began with probably less than 500 dollars each family; and so far the Communistic experiment was a success. As they increased in wealth they also received large accessions of emigrants from Germany. It was then that they consented to burn their books, which stated how much each had contributed, and henceforth to follow the maxim, "Mine is thine." Their new settlement on the banks of the Wabash, in Indiana, to which they had removed, not proving so desirable a spot as they had anticipated, they sold to Robert Owen their estate of Harmony for 150,000 dollars, and bought that of Economy, on the Ohio, near Pittsburg, which they still occupy. Economy is described as being "a model of a well-built, well-arranged country village," and the Duke of Saxe-Weimar Eisenach, who visited it in 1828, speaks very favourably of the appoint-

ments in the workshops and factories, and the healthy and joyous appearance of the workmen and women, as well as the taste displayed everywhere throughout

the Communist settlement.

In 1832 there was a secession of some members. owing to the intrigues of a scheming adventurer, who called himself the Count of Leon. Fifteen thousand dollars were paid to those members of the community who seceded to become his adherents. This again shows a further increase of capital during the twenty-seven years of the society's existence. The mystical tendency of the members in their religious seclusion, and their millenarian expectation of a speedy advent of Christ, are in strange contrast with their practical good sense and thrifty habits of life. They are not Spiritualists, like the Shakers, but Father Rapp taught them to be practical Christians, and inculcated the "duties of humility, simplicity of living, self-sacrifice, love to neighbour, regular and persevering industry, prayer and self-examination." As they hold community of goods, in imitation of the early Christians, to be one of their articles of faith, every one is bound to work with his own hands. Their mode of daily living resembles in most respects that of the Shakers. But their households consist of from four to eight men and women only, usually in equal numbers, and each family caters for itself. They are fond of flowers and music, painting and sculpture. Father Rapp's house contains a number of pictures of great value, and they have a library; still, the traveller was told, "the Bible is the chief book read among us."

Clothing is given out according to the requirements of each person, the tailor and the shoemaker each counting it a matter of honour or pride that the brethren shall be decently and comfortably clad.

"As each labours for all, and as the interest of one is the interest of all, there is no occasion for selfishness, and no room for waste. We were brought up to be economical; to waste is to sin. We live simply, and each has enough, all that he can eat and wear, and no man can do more than that." This was the explanation given to Mr. Nordhoff by a Harmonist in answer to some inquiries.

The relation of this society with the outer world, although at first it was suspected, and regarded with coldness, is one most satisfactory in every respect, and they are reported by their neighbours to be worth from two to three millions of dollars, which, in the eyes of the civilised world around them, no doubt, is an incontestable proof of their respectability. Moreover, we are told, the legal authorities of the United States, after strict investigation, bear testimony to the integrity and good administration of the funds by the rulers of the society in their management of an extensive and very complicated business, which is a remarkable testimony from unwilling witnesses in favour of administrative power in the Communal system.

The present condition of the settlement as to external prosperity is unexceptionable. Situated in one of the most picturesque spots near the Ohio river, the village of Economy and its surroundings produce a most favourable effect on the traveller's mind, whilst the placid, calm, and comfortable aspect of the inhabitants leaves no doubt as to their perfect con-

tentment and peaceful happiness.

The smallness of the population alone may produce an unfavourable effect on the observer, since, owing to their celibate life, their numbers have dwindled down from 800-1000 in their best time—to 110 in the present day, most of whom are aged. In addition to these, indeed, there are hired servants and dependents, but the hope of the future are only from twenty-five to thirty adopted children. Their large factories were closed, for there were no people to man them, and some of their other outlying

and hired servants. But this did not trouble the Harmonists in the least. They expect the speedy appearance of Christ, and make it their chief aim to prepare for it. In the meantime if asked what is to become of their vast property when they have passed away, their simple answer is, "The Lord will show us the way. We have not trusted Him in vain 80 works were carried on by means of Chinese labour far; we trust Him still. He will give us a sign."



#### THE BEGUM'S FORTUNE.

BY JULES VERNE.

CHAPTER V .- STAHLSTADT.

WE must take a leap through time and space. Five years have elapsed since the two heirs took possession of the Begum's inheritance. The scene lies in the United States, to the south of Oregon, ten leagues from the shores of the Pacific. The moment even the huge rocks might sink and disap-

district is mountainous, its northern limits as yet barely defined by the two neighbouring powers.

A merely superficial spectator might call it the American Switzerland, with its abrupt peaks rising above the clouds, its deep valleys dividing the heights, its aspect at once grand and wild.

But, unlike the European Switzerland, it is not given up to the peaceful industries of the shepherd, the guide, and the hotel-keeper. It has Alpine decorations only, just a crust of rocks, and earth and venerable pines spread over a mass of iron and coal.

Should the traveller through these solitudes stay on his way to listen awhile to the voice of nature, he would not, as on the slopes of the Oberland, hear the gentle murmurs of

insect life or the herd-boy's call, enhancing the | what is now called Stahlfeld, or the field of steel. silence of the mountain. On his ear in this wild spot would fall the heavy sound of the steam-hammer, square miles, the soil sandy and strewn with pebbles,

and under his feet would echo the muffled explosions of powder.

He would feel as if the ground was as full of trapdoors as the stage of a theatre, and that at any

pear into unknown depths.

and bed

tows

man

vigo

woo Chic worl In the the mou

are dark

and

agg

regu pier

met

cove

roofs

mou

fore

drice

which

vom

of

Thr

curt

the

ligh

flam

tant

hear

that

the

surf

shor

Stal

Tow

man

pers

of

Sch

che

fesso

who

by :

Beg

the

worl

peci

est c

smo

man

larly

estal

town

Thir

part

subu

their

celel

OWD

Pr

V

H

T

In rock

Dreary roads, black with cinders and coke, wind round the sides of the mountains.

Heaps of variegated scoriæ, which the scanty herbage fails to cover, glance and glare like the eyes of a basilisk. Here and there yawns the shaft of a deserted mine, a dark gulf, the mouth grown over with briers. The air is heavy with smoke, and hangs like a pall over the ground. Not a bird nor an insect is to be found, and a butterfly has not been seen within the memory of man.

At the northern point, where the mountain spurs slope into the plain, lies between two ranges of bleak hills what up to 1871 was called the "Red Plain," because of the colour of the soil, which is impregnated with oxide of iron, but



STABLETADT.

Just imagine a plateau of seventeen or eighteen

and altogether as arid and desolate as the ancient | hed of some inland sea. Nature has done nothing towards giving life and movement to the place, but man has brought a wonderful amount of energy and vigour to bear on it.

In five years there sprang up on this bare and rocky plain, eighteen villages, composed of small wooden houses, all alike, brought ready built from Chicago, and containing a large population of rough workmen.

the Coal Butts, as the inexhaustible mountains of coal are called, rises a dark mass, huge and strange, an agglomeration of regular buildings, pierced with symmetrical windows, covered with red roofs, and surmounted by a forest of cylinchimneys, drical which continually vomit forth clouds of dense smoke. Through the black curtain which veils the sky, dart red lightning - like flames, while a dis tant roaring is heard resembling that of thunder or the beating of the surf on a rocky shore.

This erection is Stahlstadt — Steel Town! The German city, and the personal property of Professor Schultz, the exchemistry pro-fessor of Jena, who has become, by means of the Begum's millions, the greatest ironworker, and especially the great-

est cannon-founder, of the two hemispheres. He casts guns of all shapes and of all calibres, smooth and rifled bores, for Russia, Turkey, Roumania, Italy, for Japan and for China, but particularly for Germany.

With the aid of his enormous capital, this large establishment, which is at the same time a regular town, started up as at the wave of a conjurer's wand. Thirty thousand workmen, Germans for the most part, crowded to it, and settled themselves in the suburbs. In a few months its products, owing to their overwhelming superiority, acquired universal

Professor Schultz digs out iron and coal from his own mines, which lie ready to his hand, changes

them into steel, and again into cannon, all on the spot. What none of his competitors can do he manages. In France ingots of steel are obtained, eighty thousand pounds in weight. In England a hundred-ton gun has been cast. At Essen M. Krupp has contrived to cast blocks of steel of ten hundred thousand pounds! Herr Schultz does not stop at that,-he knows no limits. Order a cannon of him, of whatever weight and power you like, he'll turn you out that cannon, as bright as a In the midst of these villages, at the very foot of new halfpenny, exactly at the time agreed on.

But he makes

his customers pay for it! It is as if the two hundred and fifty millions of 1871 had only given him an appetite for more!

In gun-casting, as in everything else, the man who can do what others cannot is sure to be well off. Indeed, Schultz's cannon not only attain to an unprecedented size. but, although they may deteriorate slightly by use, they never burst. Stahlstadt steel seems to have special properties. There are many stories current of mysterious chemical mixtures; but one thing is certain, that no one has discovered invaluable the secret.

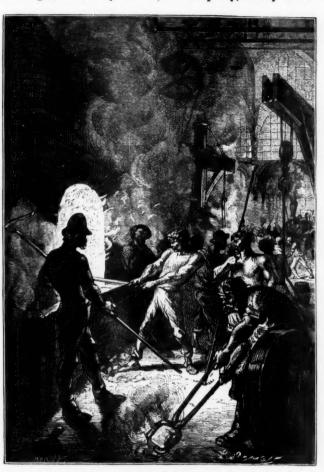
Another thing certain is that, in Stahlstadt, that secret is guarded with the most jealous care.

In this remote corner of North America, rounded by deserts,

isolated from the world by a rampart of mountains, five hundred miles from the nearest town or habitation of any sort, we may search in vain for the smallest vestige of that liberty which is the foundation principle of the United States.

On arriving under the walls of Stahlstadt it is useless to try and enter one of the massive gateways which here and there break the line of moats and fortifications. The sternest of sentinels will repulse the traveller. He must go back to the suburbs. He cannot enter the City of Steel unless he possesses the magic formula, the password, or, at any rate, an order duly stamped, signed, and countersigned.

One November morning a young workman arrived at Stahlstadt, who doubtlessly possessed such an order,



PUDDLERS AT WORK.

losions f trap-

e the

peedy

im to

t is to

passed

show

ain so

n."

at any disapknown roads, cinders wind ides of ins.

varie-

e, which

herbcover, l glare es of a Here yawns f a deo, a dark mouth er with

he air is smoke, like a r the Not a n insect found. outterfly en seen

memory northern ere the spurs to the

between ges of 871 was "Red ecause of r of the

h is imwith iron, but f steel.

eighteen pebbles, for after leaving his well-worn portmanteau at an inn, he directed his steps to the gateway nearest the

village.

He was a fine, strongly-built young fellow, dressed in a loose coat, woollen shirt, with no collar, and trousers of ribbed velveteen, tucked into big boots. He pulled his wide felt hat over his eyes, as if to conceal the coaldust with which his skin was begrimed, and walked forward with elastic step, whistling through his brown moustache.

Arrived at the gateway, the young man, showing a printed paper to the officer of the gate, was imme-

diately admitted.

"Your order is addressed to the foreman, Seligmann, section K, road ix, workshop 743," said the "You must follow the roundway to your right till you come to the K boundary, and there show yourself to the porter. Do you know the rule? Expelled if you enter another section than your own,"

he added, as the new-comer went away.

The young workman followed the direction indicated to him along the roadway. On his right lay a moat, above which marched numerous sentinels. On his left, between the wide circular road and the mass of buildings, lay first a double line of railway, and then a second wall, similar to the outer one, which entirely surrounded the Steel City.

It was of so great an extent that the sections, enclosed by the fortified walls like the spokes of a wheel, were perfectly independent of each other, although surrounded by the same wall and moat.

The young workman soon reached the boundary K, placed at the side of the road before a lofty gateway, surmounted by the same letter sculptured in the stone, and presented himself to the porter

This time, instead of having a soldier to deal with, he found himself before a pensioner with a wooden

leg and medals on his breast.

The pensioner examined the paper, stamped it

again, and said, "All right; ninth road on the left."

The young man entered this second entrenched line, and at last found himself in section K. road which debouched from the gate was the axle, and at right angles on either side extended rows of uniform buildings.

The noise of machinery was almost deafening.

Those grey buildings, pierced with thousands of windows, were like living monsters. But the newcomer was apparently accustomed to such scenes, for he bestowed not the slightest attention on the curious sight.

In five minutes he had found road ix, workshop 743, and having entered a little office full of portfolios and registers, stood in the presence of the

foreman Seligmann.

The man took the paper with all its stamps, examined it, then looked the young workman up and down. "Hired as puddler, are you?" he asked;

you seem very young."

"Age has nothing to do with it," was the answer. "I shall soon be six-and-twenty, and I've been puddling for the last seven months. If you like, I can show you certificates on the strength of which I was engaged at New York by the head overseer."

The young man spoke German quite easily, but with a slight accent which seemed to arouse the sus-

picions of the foreman.

"Are you an Alsacian?" he demanded. "No; I am Swiss-from Schaffhausen."

added, taking out a leather pocket-book and showing a passport, testimonial, and certificates.

"Very good. After all, you are hired, and it's my business simply to show you your place," returned Seligmann, assured by this display of official docu-

He then inscribed in a register the name of Johann Schwartz, copying it from the order, and gave to the workman a blue card, bearing his name and the number 57,938, adding, "You must be at the K gate every morning at seven o'clock; show this card. which will already have passed you through the outer wall. Take from the rack in the lodge a counter, with your number on it, and show it to me when you come in. At seven in the evening, as you go out, drop the counter into a box placed at the door of the workshop, and only open at that time."

"I know the system. Can I live in the town?"

asked Schwartz.

"No; you must find a lodging outside, but you can get your meals at the canteen in the shed at a very moderate price. Your wages are a dollar a day to begin with, but they will be raised quarterly. Expulsion is the only punishment. It is pronounced by me at first, and by the engineer on appeal, for any infraction of the rules. Will you begin to-day?" "Why not?"

"It will be but half a day," observed the foreman, as he guided Schwartz to an inner gallery.

The two men walked along a wide passage, crossed a yard, and entered a vast hall, like the platform of Schwartz, as he glanced an immense terminus. round, could not restrain a movement of professional

On each side of the long hall were two rows of enormous columns, as big as those in St. Peter's at Rome, their tops rising through the glass roof. These were the chimneys of the puddling furnaces, and there were fifty of them in a row.

At one end engines were continually bringing up waggon-loads of iron to feed the furnaces, at the other empty trucks appeared to receive and carry

away the metal transformed into steel.

This metamorphosis is accomplished by means of the operation of "puddling," at which gangs of half-naked Cyclops, armed with long iron rakes, were

working with might and main. The "pigs" of iron are thrown into a furnace brought to an intense heat. As soon as melted, the metal is stirred about for a considerable time. When it acquires a certain consistency, the puddler, by means of his long hook, turns and rolls about the molten mass, and makes it up into four blooms, or balls, which he then hands over to others.

The operation is continued in the midst of the hall. Opposite each furnace stands a shingling hammer

moved by steam.

Protected by boots and armlets of iron, the head covered with a metallic veil, and wearing a thick leathern apron, the "shingler," with his long pincers, takes up the red-hot ball and places it under the hammer. Down on it comes the weight of the ponderous machine, pressing out a quantity of dross, amidst showers of sparks. When it cools it is taken amidst showers of sparks. back to the furnace, to be brought out again and hammered as before.

There was incessant movement in this monster To a spectator it was a terrifying scene, the cascades of molten metal, dull blows heard above "Look! here are all my papers, quite correct," he | the roaring, showers of brilliant sparks, the glare of red-h man Po and k temp ing g work

Sch do, at exhib muscl one o work. See soon l

The But h to tal streng tired that t "Y "and anoth Sch

ing fa The Schwa engine This head, puddle The

"II employ creasin puddli "Yo ging h you can for. \ "Iv

will ha may th your se The sent a leave t chief er

"Yo

The s Schwar morning the fore into the silent a "Thi pounder

men alo The ' and fifty as he gl least six eight, or The n

steel we: the botte was a m rails, w weights. red-hot furnaces. In the fearful din and tumult, | man appeared like a helpless infant.

Powerful fellows must these puddlers be. To stir and knead four hundredweight of metallic paste in that temperature, to see nothing for hours but the blinding glare of the furnace and molten iron, is trying work, and wears a man out in ten years.

Schwartz, as if to show the foreman what he could do, at once stripped off his coat and woollen shirt, exhibiting a well-knit frame, and arms on which the muscles stood out like cords, seized a hook which one of the puddlers had just put down, and set to

Seeing that he was likely to do well, the foreman

soon left, and returned to his office.

The new-comer worked on until the dinner-hour. But he was either too energetic, or he had neglected to take sufficient food that morning to support his strength in his unusual toil, for he soon appeared tired and faint. Indeed, so worn out did he seem that the chief of his gang noticed it.

"You're not fit for a puddler, my lad," he said, "and you had best ask at once to be changed into

another section, for they won't do it later."

Schwartz protested against this. It was but a passing faintness. He could puddle as well as any one! The gang's-man made his report, however, and Schwartz was immediately called up before the chief

This personage examined his papers, shook his head, and asked, in inquisitorial tone, "Were you a puddler at Brooklyn?"

The young man looked down in confusion.

"I must confess it, I see," he answered. "I was employed in casting, and it was in the hope of increasing my salary that I wished to try my hand at puddling."

"You are all alike," returned the engineer, shrug-ging his shoulders. "At five-and-twenty you think you can do what few men at five-and-thirty are fit for. Well, then, are you good at casting?"

"I was two months in the first class."

"You had better have stayed in it! Here you will have to begin in the third. All the same, you may think yourself lucky in being allowed to change your section so easily."

The engineer then wrote a few words on a pass, sent a telegram, and said, "Give up your counter, leave this division, and go straight to section O, chief engineer's office. He has been told."

The same formalities were gone through again that Schwartz had met with at the K gate. As in the morning, he was questioned, accepted, and sent to the foreman of the workshop, who introduced him into the casting-hall. But here the work was more silent and more methodical.

"This is only a small gallery, for casting forty-two pounders," observed the foreman; "first-class workmen alone are allowed to cast the big guns."

The "small" gallery was not less than four hundred and fifty feet long and two hundred wide. Schwartz, as he glanced round, calculated that there must be at least six hundred crucibles being heated, by four, eight, or twelve together in the side furnaces.

The moulds destined for the reception of the fused steel were placed down the middle of the gallery, at the bottom of a trench. On each side of the trench was a moveable crane, which, running on a line of rails, was constantly in use for moving enormous weights. As in the puddling-hall, at one end was a

railroad for the conveyance of the bars of steel, at the other, one for taking away the cannon as they came out of the mould.

Near each mould stood a man armed with an iron rod, to test the state of fusion of the metal in the

The processes, which Schwartz had seen put in practice elsewhere, were here brought to a remarkable state of perfection.

When a cast was to be made, a warning bell gave the signal to all the watchers of the crucibles. Then, two by two, workmen of equal height, bearing between them on their shoulders a horizontal bar of iron, came with measured step, and placed themselves before every furnace.

An officer, armed with a whistle, his chronometer in his hand, stood near the mould, conveniently placed for all the furnaces in action. On each side channels of refractory earth, covered with metal, converged in gentle slopes to a funnel-shaped reservoir, placed just above the mould. The officer whistled; immediately a crucible, taken from the fire with pincers, was slung on the iron bar supported by the two workmen. The whistle commenced a series of modulations, and the two men, keeping time to it, approached and emptied the contents of their crucible into the corresponding channel. Then they tossed their empty, still red-hot receptacle into a vat.

Without interruption, at regular intervals, so as to keep up a constant flow, gangs from the other furnaces went through exactly the same operation.

It was all executed with such wonderful precision, that just at the appointed time the last crucible was emptied and flung into the vat. The manœuvre seemed rather the result of a blind mechanism than the co-operation of a hundred human wills.

Inflexible discipline, the force of habit, and the power of the measured musical strain, worked the

The sight appeared familiar to Schwartz, who was soon coupled with a man of his own height, tested in a small cast, and found a capital workman. Indeed, the head of his gang at the close of the day promised him a speedy rise.

On leaving the section O, at seven that evening, he went back to the inn to fetch his portmanteau. Then, following one of the exterior roads, he soon came to a group of houses, which he had remarked that morning as he passed, and easily found a lodging in the cettage of a good woman who "took in a lodger."

After supper our young workman did not, like too many of his class, stroll out to the nearest publichouse. He shut himself into his room, took from his pocket a fragment of steel evidently picked up in the puddling-shed, a little crucible earth from the O section, and examined them carefully by the light of a smoky lamp. Then, taking from his portmanteau a thick manuscript book half full of notes, receipts, and calculations, he wrote the following in good French, though, for precaution, in a cipher of which he alone knew the key.

"November 10.-Stahlstadt.-There is nothing particular in the mode of puddling, unless, of course, it is the choice of two different temperatures, relatively low for the first heat and the re-heating, ac-cording to Chernoff's rules. As to the casting, it is done after Krupp's process, but with a perfectly admirable uniformity of movement. This precision in manœuvres is the great German power. It results

ving it's rned

locu-

hann o the l the 10 K card, outer inter.

out, of the wn?"

n you

t you lat a a day rterly. unced al, for lay?"

ry. rossed orm of lanced ssional

fore-

ows of ter's at s roof. rnaces, ing up

at the

d carry eans of angs of es, were

furnace lted, the . When dler, by bout the ooms, or

the hall.

hammer the head a thick pincers, nder the t of the of dross,

t is taken gain and monster scene, the

ard above e glare of from the innate musical talent in the German race. The English could never attain to this perfection; they have no ear, and want discipline. The French may reach it easily, as they are the most perfect dancers in the world. So far there appears to be nothing mysterious in the remarkable success of this The mineral specimens which I manufacture. picked up on the mountain are similar to our best iron.

"The coal is certainly uncommonly fine, of an eminently metallurgic quality, but still there is nothing

unusual in it.

"There is no doubt that in the Stahlstadt manufacture special care is taken to purify the principal materials from any foreign matter that they may be employed only in a perfectly pure state. The result may easily be imagined. To be in possession of the remainder of the problem, I have only to determine the composition of the refractory earth of which the crucibles and the channels are made. This discovered, and our gangs of workmen properly drilled, I do not see why we should not do what they do here. All the same, as yet I have only seen two sections, and there are at least four-and-twenty, without counting the central building, the plans and models department, the secret cabinet! What dangerous schemes may not be maturing in that den? What may not our friends have to fear, after the threat uttered by Herr Schultz when he took possession of his fortune?"

After these questions, Schwartz, who was tired enough with his day's work, undressed, laid himself down in a liltle bed, which was about as uncomfort. able as a German bed could be—and that is saying a good deal—lighted his pipe, and began to smoke, and read a well-worn book. But his thoughts were apparently elsewhere. The odorous clouds issued from his lips as if they were saying, "Pooh! pooh! pooh! pooh!"

He soon put down his book, and remained lost in thought for a long time, as if he was absorbed in the

solution of a difficult problem.

"Ah," he exclaimed, at last, "though the prince of darkness himself should try to prevent me, I will find out the secret of Professor Schultz, and, above all, what he is meditating against Frankville!

Schwartz went to sleep murmuring the name of Dr. Sarrasin; but in his dreams it was the name of Jeannette, sweet little Jeannette, that was on his lips. He had never forgotten the little girl, although Jeannette, since he last saw her, had grown into a young lady. This phenomenon is easily explained by the ordinary laws of the association of ideas. Thoughts of the doctor brought up that of his daughter—association by contiguity. Then, when Schwartz-or rather Max Bruckmann-awoke, having still Jeannette in his mind, he was not at all astonished, but found in this fact a fresh proof of the excellence of the psychological principles of John Stuart Mill.

### HANSTEEN'S TRAVELS IN SIBERIA.

X .- ASTRAKAN, AND THE PERPETUAL FIRES OF BAKU.

STRAKAN, one of the most important cities of A the Russian Empire, is situated on an island of the Volga, called Dolgoï-Ostrov (or Long Island), at about fifty versts from the mouth of that river. The Caspian Sea was formerly nearer to the city, but the sand brought down by the Volga gradually formed a delta, consisting of a number of small islands. Its summer is extremely warm, although the winter is severe. To profit by the hot weather, its inhabitants have planted vines on the slopes descending to the river, walled round by high terraces of earth. The vines are watered by means of machinery placed near the river, which conducts the water up to the gardens by wooden conduits, put in motion by camels or by horses. Many different kinds of wine are made-even champagne, red and white, which seemed to me almost as good as French

champagne. There are in Astrakan no less than twenty-five Greek churches, a monastery, and a convent of nuns; two Armenian, a German Lutheran, and a Roman Catholic church; nineteen mosques, and a religious "hall of prayer" for the Hindoos. The city is inhabited by Russians, Tartars, Georgians, Germans, English, Persians, Hindoos, Khivans, and other Europeans and Asiatics. Altogether, the population is about 30,000, and occasionally, including strangers resorting thither for trade, the aggregate may amount to 70,000. Astrakan is the centre of an important trade, not only with the interior of the empire, but also with Persia, Khiva, Bokhara, and India. Its imports are silk, cotton (raw and manufactured), otter-skins, Persian stuffs, and precious

merchandise from India; lamb-skins, sheep-skins, from the Caucasus and from Circassia; warm dresses from Bokhara, corn from Turkey, pulse and grain from Persia, and an abundant quantity of fruit. The exports are cloth, wax, soap, gold and silver, diapered copper, lead, iron, steel, mercury, alum, vitriol, sal ammonia, and morocco. It is from this city that the fine varieties of fish caught in the Caspian and at the mouths of the Volga, Terek, and the Kur are sent. Within the city there is a botanical garden, and one of medicinal plants. In a large house belonging to an Armenian, which was pointed out to us by the police, we were permitted to occupy as many rooms as we required, the proprietor being absent.

At Selinginsk (south of Lake Baïkal), near the Chinese frontier, I had made the acquaintance of an English missionary, who gave me a letter for one of his countrymen, named William Glen, who was living at Astrakan. I sought him out, and sometimes I met a Persian called Abdullah Vizieroff at this Englishman's house. He had been vizier to the Shah of Persia, but an insurrection to remove the Shah from the throne, in which Vizieroff was implicated, being discovered, he was obliged to take flight, and found refuge in Astrakan. In memory of his ancient grandeur he had adopted the name of Vizieroff. He had obtained the place of Persian professor in the Gymnasium for instruction in Oriental languages, and was assisting the missionary to translate the Bible into Persian.

General Willielminoff, formerly commander-in-

chief of Georgia, had strongly advised me to make

an excu describe very cur Baron F his Im Admira ment ve whence Thus er learnt t authorit

The I are the tains," of naph on the which it at a high only one exist, w naphtha is sent kitchen breadother m ever, prodried he which be The se

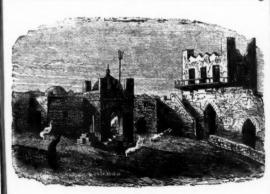
Apscher kind in space of deeper 1 fire, the Neverth easily re duces ne circumfe



the fire until cove nollow co way, but were giv green an Sollow, a wells of garden. found nea of the ar symbol of near the l an excursion from Astrakan to Georgia, which he described to me as being attractive, and exhibiting very curious phenomena. "By asking your Minister, Baron Palmstjerna, to address himself to the Emperor, his Imperial Majesty will give the order to the Admiralty at Astrakan to convey you in a Government vessel from Astrakan to Baku, on the Caspian, whence you may proceed to Tiflis, capital of Georgia." Thus encouraged, I wrote to M. Palmstjerna, and learnt that such an order had been given to the authorities at Astrakan.

The most remarkable phenomena in these parts are the springs of naphtha, the "growing mountains," and the so-called "eternal fire." The sources of naphtha are found near the town of Baku, and on the peninsula of Apscheron. Some wells from which it is taken produce white naphtha, which sells at a high price. The wells are sealed up, and opened only once a month. Besides these, about fifty others exist, which yield an immense quantity of black naphtha. They are emptied daily, and the naphtha is sent to Baku, and is there used for lamps and kitchen fireplaces, and in the ovens which bake bread—for, indeed, the village does not possess any other material for producing heat. Russians, however, prefer to have their bread baked over a fire of dried herbs. The most abundant wells of naphtha, which belong to Government, yield 7.500 lb. daily!

which belong to Government, yield 7,500 lb. daily! The so-called "eternal fire" on the peninsula of Apscheron is perhaps the only phenomenon of the kind in the whole world. It burns in a hollow space of irregular form. The hollow never becomes deeper by the emission of this continually-burning fire, the stones at the bottom resist its action. Nevertheless, the limestones become friable, and are easily reduced to powder. The "eternal fire" produces neither smoke nor smell, and exists within a circumference of two versts. Wherever a hole is dug



FIRE TEMPLE AT BAKU.

the fire kindles up and burns with a quick flame until covered over with earth. The fire in the largest nollow could, no doubt, be extinguished in the same way, but would burn up again whenever free vent were given it. It is remarkable that grass grows green and fresh on the borders of this burning hollow, and that at some little distance there are two wells of excellent water and a large, productive garden. Some fire-worshippers are always to be found near the principal focus of the fire, descendants of the ancient Parsees, who regard all fire as a symbol of the Deity. These people live in little huts near the hollow. In the middle of each hut there is

a hollow made, encircled by a border of stones, on which a cauldron to cook their food is placed. Straw or dried herbs are collected, which, lit at the "eternal fre" outside, are then placed under the cauldron. The hollow ignites immediately, and keeps burning on, without smoke or smell. Thus a kitchen fire is lit much more rapidly than with wood. The hollow is afterwards covered with felt, and the flame thereby extinguished. Hermits during the winter warm themselves at these burning hollows; nor do they require any other light than that which it affords.

This country offered yet another phenomenon. During the fine days of autumn, when the evening air was warm and sultry, the fields round Baku appeared on fire; sometimes flames of considerable size were seen to glide along the summits of the rocks, whilst the surrounding mountains emitted a bluish light. Innumerable tongues of flame, sometimes separated, sometimes uniting, cover the plains when the nights are dark and warm, terrifying the horses, mules, and, indeed, all animals. But this singular phenomenon lasts for four hours only, and generally during the months of October and November. After sunset, should a strong easterly wind prevail, they are no longer discernible; and this aërial element—if we may so call it—will not burn inflammable matter as other fires will. The reeds and rushes never take fire-a most singular circumstance-though the surface of the earth be covered with flames. And, more than this, if you place yourself in the midst of these fires you do not feel any heat from them!

The "growing mountains" are found between Baku and Navagi, along the road, within a space of about fifteen versts. They are of various heights, never attaining any very great elevation. Their colour is grey, they are devoid of vegetation, and their form is conical. The soil is argillaceous earth; each mountain seems to contain within itself a source of salt-water, thick and slimy, which, ascending up to its summit, overflows when it reaches the edge of the opening. The deposit becomes petrified, and thus gradually increases the dimensions of the mountain. Some of these springs—those at the highest elevation—have been dried up, but others have burst forth from openings at the sides, and are continually spouting a thick slime. Not only in this locality, but in other parts of the country, "growing mountains" exist. Near the sea there is a mountain which is constantly emitting flames.

We quitted Astrakan on the 25th February, but scarcely had we proceeded 300 versts to the north when the great depth of snow forced us to halt at one of the stations provided ry the State (real blessings for poor travellers), that some sledges might be constructed by the peasarts on which to place our carriages. By dint of advancing, though slowly, we reached Sarepta, an interesting German colony of Moravian Brothers, where we passed a very agreeable day. It was strange to find ourselves all at once in Germany, as it were, and in the midst of European life and customs.

At Zarizen, about thirty-one versts from Sarepta, we heard that the shortest route to Moscow, which we had decided on taking, would be impracticable for our heavy carriages, owing to the immense quantity of snow that had fallen. We were obliged, therefore, to pursue the road along the Volga as far as Saratov. This change of route enabled us to see the German colonies established near that river. To the north of

skins, resses grain fruit. silver, alum, m this

ired

self

ort-

ng a

and

ppa-

rom

ooh!

t in

the

rince

will

bove

e of

lips.

ough

ato a

ained

deas.

when

hav-

of the

John

alum, m this in the ik, and tanical large pointed occupy being

one of ho was I someeroff at r to the ove the implito take

e of an

memory name of Persian tion in ssionary

nder-into make Kamischen 103 German colonies have existed since about the year 1760. We spoke German to all the peasants we met, certain of receiving an answer, sometimes a little difficult to understand, although these people came from Saxony, Bavaria, and Alsace. These colonists speak a bad German, and as it must have been a second or third generation from the first settlers whom we saw, their language was certainly not purified by contact with Russians. I had been told that French colonies had settled to the north of these Germans, but that the French had gradually disap-Had the plague or cholera then visited them, and were they all carried off by it? No; they had all become teachers of the French language or governesses in grand Russian families. "If these French people," thought I, "spoke French after the fashion that the German colonies spoke German, the young princes and princesses who had them for teachers must have been taught a fine language!"

The 9th of March we quitted Saratov to proceed w.w. to Pensa, the chief town of the district. The roads became worse and worse; they were so cut up by incessant traffic on them that we fell out of one hole into another, and advanced only at a foot's pace. We got through only thirty-five versts the first day and forty-five versts the second day, although 150 versts may very well be accomplished in twelve/hours when the winter road is good. In the morning we were obliged to have one of the sledges thoroughly repaired; the other broke to pieces on the high road as we advanced, although very strongly constructed. It was necessary to unharness the horses, and to send a jämstschik, or postilion, on horseback to the first village, eight versts off, to bring carpenters and two aledges filled with beams and tools; in fact, all that

was necessary to repair it. During that time we had to wait four or five hours in the snow in the middle of the road.

The road became longer by the undulating lines we were afterwards obliged to make. When we arrived at a great cavity we were obliged to use the pickaxe to make the road level; but this proceeding was so very slow that it did not much forward our onward progression. It often occurred that five horses could hardly pull the carriage out of these hollow places, even though the poor brutes were unmercifully flogged. In the most difficult places I got out and walked, taking my barometer in my hand, fearing that these sudden jerks would injure it. The deep ruts on the road are worn by the continual passing of the peasants' sledges laden with merchandise. When a cavity is formed in a mass of snow several feet deep the sledge is pushed into the cavity and drags with it the snow from the elevation; thus it becomes more and more hollowed out, and more difficult to pass over. After five days of horrid journeying that tried our patience and our temper to the utmost, we at last arrived at Pensa, situated 195 versts from Saratov. Our sledges were there repaired by a good German blacksmith. There, too, our servants obtained the welcome refreshment of two nights' rest; a luxury they had not enjoyed since our departure from Kazan.

After undergoing fatigues of all kinds, we reached Moscow at last, where we found many old acquaintances. The snow having disappeared, it was necessary to place our carriages on wheels for the rest of the journey to St. Petersburg. On the way, first one wheel and then another broke; but at length, at midnight, on the 9th of April, we entered the imperial

# HEATING AND VENTILATION OF ST. PAUL'S.

THE grandest work of Wren, occupying, as it does, the site of more ancient ecclesiastical edifices, and forming, as it were, the centre of the civilisation, enterprise, and busy life of London, offers a subject for thought in many directions, historical, political, and ecclesiastical. What passes in the pulpit or in the choir I do not presume to criticise, my humbler object is to refer to the sanitary condition of the edifice in the matter of ventilation.

The enormous interior of St. Paul's Cathedral, forming a chamber of immense capacity rising in the centre to, say, 350 feet, with lofty branching corridors of great length, with walls of such thickness and roofs so high, offers certainly the primary condition of sanitary perfection, so far as cubic space is concerned. It may be that a thousand worshippers would not, during an hour or two, so seriously poison the air of the church as to make it injurious to themselves; but if a succession of congregations attended, and no change of the contained air was effected, each succeeding assembly must become influenced in increasing proportion. Such a condition is actually experienced on some of the high days when there is a constant succession of visitors, with the consequent departure of the former and the arrival of a new set of worshippers; the interval between the services affords scarcely sufficient time

for the abstraction of the used air and its replace-

ment by a fresh supply.

With such an extent of outer wall as is here required to enclose so large an area, very many windows must of necessity be made for the sake of light. These, of duly large proportions, are glazed with quarries of glass in leaden lattice, and as some interspace must exist, by the very nature of the materials, between the two, although small for each pane, yet, in the aggregate of the very many thousands, must form a considerable opening, a constant means is thereby offered for the transmission of air outwards or inwards, as the case may be. Many of the windows are, moreover, supplied with louvres, which are opened as occcasion requires. The doors, of which there are outer and inner, and a moderate space between, opening almost immediately into the great space, will also give access for air in proportion to their more frequent use; while the ornamental gratings over the inner doors also transmit a large constant supply when the outer doors are kept partially open.

But the chief source for fresh air is by the crypt. This has, of course, as large a superficial area as that of the church above it. The roof is arched, and being at twenty feet from the floor, a very large cubic space is thus formed. Air is here admitted by

vard. from metri suppl warm a yar the c coke group havin other the u Burfa air ci draug nately pipes heate its wa churc prima of the lates ! and w penter Fro years through

wind

desce

belov

press

verb

it rise sions and n entere year r sensati when On the winter while t was pr by six the ot when, street i church Serv aid of

rangin

heat o

when

open a no art peratu observ

around arches of com air of t higher called window one. I sidered narily . through

the crov

windows on a level with the ground outside, and descends-the floor of the crypt being some feet below the surface-in a volume proportioned to the pressure of the wind, which, according to the proverb and in fact, always blows in St. Paul's Churchyard. No means exist for the removal of dust or soot from the air by filtration, or of altering its hygrometric condition, if we except the water constantly supplied to the troughs of the Gurney stoves in use for warming the air. These are thirteen in number, about a yard in diameter, and placed in different parts of the crypt. Each of them consumes a chaldron of coke per week when in use. They are arranged in groups of two, three, or four, the smoke-pipes of some having direct communication with the chimney-shaft; others have an arrangement of stove-pipe which delays the upward draught, and gives greater time and surface for transmitting the contained heat to the air circulating in the crypt. This is effected by the draught as it proceeds upwards, communicating alternately with the ends or centre of four transverse pipes of the same calibre. The air of the crypt becoming heated by this means, ascends to the roof, and finds its way by many grated openings into the body of the church above. Such an arrangement, while it fulfils its primary object of warming the air in the great space of the cathedral, at the same time warms and ventilates the crypt itself, where much material is stored, and where also a great deal of the masons' and carpenters' work connected with the edifice is carried on.

nad

dle

We

use

-bee

ard

five

llow

erci-

out

ear-

deep

g of

Then

deep

with

omes

ilt to

that

t, we

from

good

ained

t; a

from

ached

uaint-

neces-

est of

st one

th, at

perial

replace-

here re-

y many

sake of

glazed

as some

he mate-

ch pane,

ousands,

nt means

outwards

y of the

es, which

doors, of

moderate

into the

roportion

namental

it a large

kept par-

the crypt.

l area as

ched, and

ery large

mitted by

From records kept by an official for the last sixteen years it is ascertained that the cathedral is kept throughout winter and summer at a temperature ranging between 55° and 60°, whatever may be the heat or cold of the external air. Only exceptionally, when some great works were in progress, with doors all open and some windows out, when at the same time no artificial heat was created, and the external temperature has been very low, was the internal heat observed as low as 32°; or, on the other hand, has it risen to its highest temperature of 62° on the occasions of continued service, crowded congregations, and much consumption of gas. Any one who has entered the sacred edifice at different seasons of the year must have experienced how comfortable the sensation of comparative warmth within has been when there has existed outside a keen biting wind. On the occasion of a visit to the cathedral during last winter, the external air at the north porch was  $31^{\circ}$  while that within the building was  $57^{\circ}$ . This difference was produced and maintained by the heat given out by six of the Gurney stoves in the crypt; while, on the other hand, what a refreshing change is felt when, from the hot and glaring pavement of the street in summer, the still, cool interior of the great church is reached!

Services in winter or in the evening require the aid of artificial light, supplied by rows of gas-jets around the whispering-gallery, and over four large arches surrounding the central area. The products of combustion ascend with the heated and breathed air of the assembly directly upwards into the dome; higher and higher it climbs, until arriving at what is called the Lantern—a smaller dome containing windows, and crowning the opening of the larger one. It here gets egress by the lights if it be considered necessary to open them, otherwise and ordinarily the used air rushes with considerable force through an aperture of about a foot in diameter in the crown of the smaller dome, and escapes by passify on the part of the smaller dome, and escapes by passify the part of the smaller dome, and escapes by passify the part of the smaller dome.

sages and external doors connected with the golden gallery and the cross. There are also large openings ranged along the walls of the nave, choir, and transepts immediately over the cornice, by which the used air is conveyed away through passages and shafts. At a visit made a short time since, about an hour after the usual morning service had been held, the air coming through this hole had nothing disagreeable in its character, while it must have mainly consisted of what had supplied the assembled worshippers during the hour of their sojourn at prayers; the only remarkable characteristic connected with it was the very great force with which it passed through the aperture. A peep through this will, while it gives satisfaction as to sanitary matters, at the same time impress the beholder with the vastness of the size of the interior and the wonderful ability of the architect; instead of the word circumspice on the memorial tablet to Wren beneath, it would have read, if it had been erected here, inspice.\*

Mention has been made of the shafts into which the flues from the Gurney stoves enter. It is difficult to convey by a description only their position, but some idea may be arrived at thus. The roof of the nave is higher than the roofs of its lateral aisles, but the external wall is carried up to such a height as to conceal the central roof. It follows, therefore, that large interspaces-sufficient, indeed, for a small church-exist between the roof of the central aisle and the enclosing wall, which is strengthened by buttresses continued from the basement in the crypt. These buttresses are hollow, and thus form the shaft of the chimneys, but they are not hollow to the top. Just clear of the roof of the side aisles they open into the air; here a continuation of the chimney is formed of glazed pipes, with cemented joints, which terminate abruptly at the top edge of the wall, and thus is formed a source of occasional trouble in the heating apparatus; for certain winds, reverberating and eddying about the salient portions of the building, blow down these open chimneys with very great force, driving sometimes the smoke and sulphurous vapours back into the crypt. The remedy has been sought by placing galvanised caps, or cowls, on the abrupt ends of the flues, but these, it is said, have been soon eaten away by the acids of smoke and the effects of the weather in their elevated position. The most effectual remedy is to desist from using the stoves in the particular position affected by the wind, and lighting those in another direction. It is possible that among the many devices suitable for suchlike grievances some earthen top, or cap, could be found that would prevent this unpleasant occur-

Much dust and dirt must of necessity be brought in by so many visitors; this remains upon the floor

Underneath is buried (conditur) the builder (conditor) of tma church and city, Christopher Wren, who lived upwards of ninety years, not for his own but for the public benefit. Reader, if you seek his monument look around you. He died Feb, 25, aged 90, in the year 1723,

<sup>\*</sup> Wren's epitaph, formerly over the entrance to the choir, is now placed above the inner doors at the north entrance, and runs thus:—

<sup>&</sup>quot;Subtus . conditur . huius . ecclesiæ . et . urbis .
Conditor . Christophorus . Wren . qui . vixit .
Annos . ultra . nonaginta . non . sibl . sed .
Bono . publico . Lector . si monumentum requiris
Circumspice .
Obiit xxv Feb. Ætatis xci.
Ano. M.D.COXXIII.

of the church, or falls through the grated openings, where it is caught upon stages suspended underneath, and removed at intervals. That on the floor is swept up daily, after a quantity of damp sawdust has been strewed about. The resulting heaps being at times considerable, there is consequently but a minimum of dust to be wafted about by the constant ebb and flow of visitors, a circumstance of no small consideration in regard to health and cleanliness.

Considering the uses of the vast building, the requisite supply of fresh air maintaining it at a wholesome temperature, and the effectual removal of consumed air with the products of gas combustion, it seems that the means employed, although not very scientifically planned, or incapable of improvement,

yet sufficiently fulfil the purpose intended.

# Varieties.

QUEEN VICTORIA'S FIRST GREAT-GRANDCHILD.—The Princess of Saxe-Meinengen, who was born on May 12, at the Villa Carlotta, near Sans-Souci, is singularly well provided with living ancestors, having no fewer than two great-grandfathers and four great-grandmothers still in life. The great-grandfathers are the German Emperor William, now in his 83rd year, and Duke Bernard, in his 79th year. The great-grandmothers are the German Empress Augusta, now in her 68th year; her Majesty the Queen, who completed her 60th year on the 24th of May last; Princess Mary Anne of the Netherlands (mother of the late Princess Charlotte of Prussia, whose son, the hereditary Prince of Saxe-Meiningen, is the father of the infant princess), who completed her 69th year a few days ago; and the Duchess Mary of Saxe-Meiningen, the direct paternal great-grandmother of the infant. Besides, both her grandfathers (the Crown Prince of Germany, now in his 48th year, and the reigning Duke of Saxe-Meiningen, in his 54th year) are living, but only one grandmother, the Imperial Princess of Germany, mother of the young mother of the child.

Mr. Longfellow on Old Age.—At a recent entertainment in a school at Chicago a letter was produced, written by Mr. Longfellow, in which he said, in answer to a letter sent to him:—"I can only send you and the boys and girls under your care a friendly salutation. To those who ask how I can write 'so many things that sound as if I were as happy as a boy,' please say that there is in this neighbourhood or neighbouring town a pear-tree planted by Governor Endicott two hundred years ago, and that it still bears fruit not to be distinguished from the young tree in flavour. I suppose the tree makes new wood every year, so that some part of it is always young. Perhaps that is the way with some men when they grow old; I hope it is so with me. I am glad to hear that your boys and girls take so much interest in poetry. That is a good sign, for poetry is the flower and perfume of thought, and a perpetual delight clothing the commonplace of life 'with golden exhalations of the dawn.' Give all my sympathy and my good wishes."

HANDEL AND THE HARMONIOUS BLACKSMITH.—The reappearance at a sale of the "real anvil and hammer of the harmonious blacksmith" has called forth this letter from Mr. Walter Maynard:—"The original anvil and hammer of Powell, 'the harmonious blacksmith' of Whitchurch, from which Handel composed his celebrated melody, may be a curiosity and unique in its way, but it has most certainly no associations with the mighty master except those which exist in the imaginations of the deluded. The famous air in No. 5 of the 'Suites de Piéces pour le Clavecin' was originally christened 'The Harmonious Blacksmith' by Lintott, a music publisher at Bath, who, on being asked why he so called his edition of the music, replied that his father was a blacksmith, and that it was one of his favourite tunes. In 1820, a hundred years after the piece was first published, a newspaper writer of the time concocted the tale of the blacksmith's shop, and Mr. Richard Clarke was deceived by the fiction. Mr. Clarke went to Edgware, found out the descendant of Powell, the blacksmith, whose shop was near Canons Park, bought the anvil, and satisfied himself that he had verified the newspaper writer's account of an

incident in Handel's life. A more absurd delusion never existed. As Schölcher, Handel's biographer, says, 'the "Harmonious Blacksmith" has been published a thousand times under that title, but Handel himself never called it so; the name is modern.' The air is found in a collection of French songs printed by one Christopher Ballard in 1565. It is not likely an English blacksmith ever heard it, and still less probable that Handel, with his love of finery and dignified manners, would have adopted an air heard under the circumstances."

The late learned Dr. Rimbault, in a series of papers in the "Leisure Hour" for 1875, devoted one to "Handel's Church." He there proves the absurdity of connecting Handel with Whitchurch or Little Stammore, much less with the village blacksmith of that parish. It was not for the parish church, but for the domestic chapel of the Duke of Chandos at Canons, Edgware, that an anthem by Handel was performed, as part of the inaugural service. There is a brass tablet let in over the organ of Little Stammore Church, recording that "Handel was organist of this church from 1718 to 1721;" but Dr. Rimbault says "there is not the vestige of an authority for any part of this statement." See "Leisure Hour," 1875, pp. 733-736.]

VETERANS OF THE CHURCH MILITANT.—In the clerical obituary for June were the names of two veterans who had in early life served in the army and navy. The Rev. William Leeke, a Waterloo veteran, and for the last fifty years a clergyman of the Church of England, died at Holbrooke Hall, near Derby. The son of the late Mr. Samuel Leeke, of Havant, Hants, and St. John's, Isle of Wight, he was born in 1797, and entered the army at the age of seventeen, being fortunate enough to join his regiment, the 52nd Light Infantry, just six weeks before the battle of Waterloo. In this action he carried the regimental colours of the 52nd. Some years ago Mr. Leeke wrote "Lord Seaton's Regiment at Waterloo," a book containing an account of the part which that well-known regiment took in the defeat of the French Imperial Guard by a flank charge near the close of the battle. After Waterloo, Mr. Leeke served with his regiment in the army of occupation. He soon afterwards retired from the army, and, after taking his degree at Cambridge, was ordained a clergyman. For thirty-seven years he was incumbent of Holbrooke. The Rev. Thomas Bury Wells, M.A., Rector of Portlemouth, South Devon, and one of the survivors of the battle of Algiers, died at Portlemouth at the age of eighty-four. Mr. Wells, who left the navy fifty years ago to enter the Church, was present at the blockade of Flushing in 1810, and was midshipman of the Granicus at Algiers. His conduct on that occasion was reported by his captain as having been "conspicuously gallant."

The Late Mr. Lloyd Garrison.—The death of Mr. William Lloyd Garrison, the veteran Abolitionist, which was recorded on May 26th, has given occasion for very full accounts of his life and times in American papers. The "New York Times" says:—"Shortly after Mr. Garrison suspended the publication of the 'Liberator' a subscription was made by his friends of the sum of 30,000 dols., which was presented to him as an evidence of the deep respect which his fidelity to the cause of freedom had awakened. As he had never made a dollar from his paper, and as he had spent his modest means most freely for the promotion of the anti-slavery movement, this gift was a timely one, and secured to him that peace of mind regarding his pecuniary needs which he had richly earned. He never afterwards took any very prominent part in public life, though he devoted much time and work to advancing the education of the negroes and to the defence of the political rights which had been accorded them by the constitutional amendments. In person, Mr. Garrison was one who would readily attract attention. Of medium height, his form was erect and compactly built; his movements were easy, alert, and graceful; his countenance was peculiarly bright in expression, his features clean cut, his forehead rather high, but finely rounded, and his eyes, vivacious in conversation, often glowed during his public addresses with a sombre flame. As an orator he had few gifts. His voice was high and thin, but penetrating; his gestures were monotonous, being confined to a long, sweeping movement of his arm and elenched hand, as if he were driving home his arguments or denunciations. But the transparent sincerity of his spirit, and the vigour and simplicity of his abundant but terse speech, always caused him to be listened to with interest. He had the faculty of attaching his personal friends to him with the closest affection, and his memory, apart from his public services, will long be cherished by many now in the prime of life who in their youth were first aroused to

I begin shrev

TWO of at I gained a se be celebratericket market No. 144